

PRINTING GROUPS AND METHOD OF TRANSFERRING PRINTED SHEETS IN
SUCH A PRINTING MACHINE --

Change the paragraph starting on page 23, line 6 and ending on page 24, line 26 to read as follows:

Fig. 5 shows a gripper system 18 on a transfer cylinder 13. Here, the gripper system 18, arranged in a cylinder gap or channel 24 extending axially in a sheet-carrying transfer cylinder 13 of the printing machine 1, is arranged on a slide 25 which has an angular cross section. At the upper end of an upwardly directed slide leg, there is disposed a gripper pad 26 for a gripper 27 of the gripper system 18 arranged on the slide 25. The horizontally extending leg 28 of the slide 25 is arranged by rolling-contact bearings on a non-illustrated bearing plate which can, in turn, move on rolling-contact bearings in the axial direction of the transfer cylinder 13. At both axial ends of the transfer cylinder 13, actuators are connected to the slide 25 and are activatable counter to the action of a spring which is braced by one end against the horizontal leg 28 of the slide 25 and by the other end against the wall of the cylinder gap or channel 24 formed in the transfer cylinder 13. The actuators are movable perpendicularly to the plane of the drawing, counter to the action of a spring. Arranged on the surface of the gripper pad 26 are electronic measuring elements 30, for example linear

CCDs which can be illuminated, for registering the leading edge of the printed sheet, and the measuring elements supply, via a computer, control pulses for the actuators for the positional correction of the printed sheet in the conveying direction. For lateral sheet alignment, electronic measuring elements 30, for example likewise linear CCDs which can be illuminated, are arranged at least at one axial end of the transfer cylinder 13. The latter linear CCDs can be set in a conventional manner, as a function of the format, and, via one of the data processors of the control device 14, as shown in Fig. 1, control the actuators for the displacement of the gripper system 18 on the carriage in the direction of the cylinder axis. By using a desired or nominal/actual comparison, the measured values from the electronic measuring elements 30 on the gripper pad 26 are used by the control device 14 to obtain control pulses for the actuators for the positional correction in the conveying direction of the printed sheet and, by the electronic measuring elements 30 at the axial cylinder end, to obtain control signals for the lateral positional correction of the printed sheet. During these correctional movements, the printed sheet is held securely in the gripper system 18, so that the in-register transfer of the printed sheet to the gripper system of the subsequent second cylinder 19 of the printing unit group III is assured. Only after the printed sheet has been released by the gripper system 18 does the slide with the gripper system

(continued)

a'
(concluded)
18 arranged thereon return to the zero position as a result of
the spring action.

✓ Change the paragraph starting on page 19, line 16 and ending
on page 20, line 3 to read as follows:

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For this purpose, the motors 7 and 9 are controlled by a control device 14. The task of the control device 14 is to control the motors 7 and 9 in accordance with a prescribed desired or nominal speed so that the prescribed angular difference between the two printing unit groups II and III is not exceeded. The maximum difference depends upon the dynamics of the drives. In addition, the task of the control device 14 is to determine the operating parameters at the instant of time that the printed sheet transfer occurs and to communicate the parameters to the compensation elements 15. The compensation elements 15 are not shown as such in Fig. 1 and are assigned to a gripper system 18 on the transfer cylinder 13. According to the invention, the compensation elements 15 serve to compensate for the transfer error.